Kidney International (2006) **69,** 1101. doi 10.1038/sj.ki.5000390

Massive bleeding after biopsy of a renal allograft

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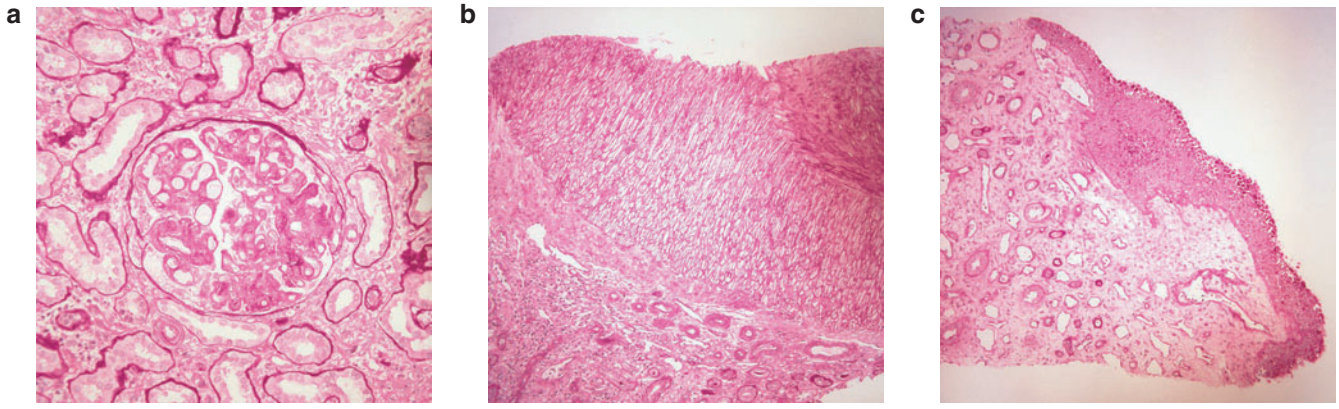

Figure 1 | Renal histology. The kidney biopsy contained (**a**) renal cortex with glomeruli, (**b**) a tangentially sectioned artery, and (**c**) urothelium from the pelvis. (Periodic acid-Schiff staining.)

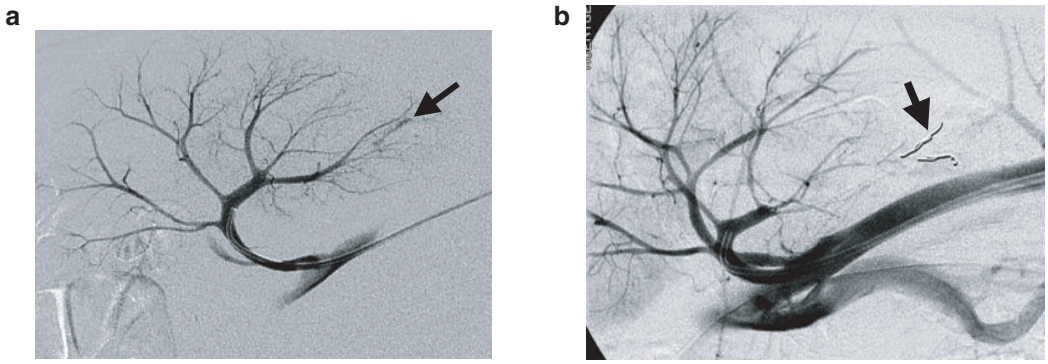

Figure 2 | Angiography of the allograft. (**a**) Digital subtraction angiography showed intragraft active bleeding (arrow). (**b**) Bleeding ceased after embolization of two peripheral intrarenal arteries with four endovascular microcoils (arrow).

A 40-year-old woman underwent ultrasound-guided renal biopsy after having received a kidney transplant 6 years ago. Her creatinine level was 4.5 mg/dl. The biopsy contained renal cortex with glomeruli (Figure 1a); a tangentially sectioned large artery, potentially an interlobar caliber vessel (Figure 1b); and urothelium from the renal pelvis (Figure 1c). Within minutes, massive macrohematuria and hemorrhagic shock occurred. To avoid loss of the transplant due to nephrectomy, digital subtraction angiography using gadolinium was immediately performed. This detected intragraft active bleeding that also involved the renal pelvis (Figure 2a, arrow). With the use of four endovascular microcoils, two small peripheral intrarenal arteries were embolized. Control arteriography confirmed the successful embolization, and hemorrhage ceased (Figure 2b, arrow). The patient's condition promptly stabilized. The patient was discharged with a functioning allograft.

Massive bleeding after biopsy of a renal allograft is a rare but potentially devastating event. Nephrectomy can be avoided by angiographic embolization of intrarenal arteries.